



**MISSOURI DEPARTMENT OF TRANSPORTATION
MATERIALS ENGINEERING
Jefferson City, Missouri**

**Test Method
MoDOT T12
STRIPPING OF BITUMINOUS - AGGREGATE MIXTURES
(BOIL METHOD) (FOR SEAL COATS)**

1.0 SCOPE

This test is intended to determine the stripping characteristics of a bituminous aggregate mixture made with the materials proposed for use on a project.

2.0 PROCEDURE

Thoroughly dry the aggregate and screen out 500 grams passing a 3/8" sieve and retained on a No. 10 sieve. Place this fraction of the aggregate in a suitable enamel-ware pan and heat to a temperature of approximately 300°F. Add 30 grams of asphalt which has also been heated to approximately 300°F. Stir the contents of the pan with a small spatula until all of the aggregate particles have been thoroughly coated. Allow the mixture to cool at room temperature for two hours. (Note 1).

At the end of the two hour period, transfer approximately 100 grams of the mixture to a 400 ml. beaker and add distilled water until the beaker is about three-fourths full. Place the beaker and its contents on a suitable gas burner or hot plate and apply heat until the water has boiled vigorously for one minute. Remove the beaker and its contents from the burner or hot plate, skim off any floating bituminous material and carefully decant the water. Transfer the mixture to a filter paper having a diameter of 15 cm by inverting the beaker. The mixture should not be stirred or disturbed in any way after it has been placed on the filter paper.

After the free water has disappeared from the boiled mixture, the amount of uncoating is estimated visually. This may be expressed as the approximate percentage of aggregate surface uncoated or by more general terms, as; "none", "very slight", "slight", "moderate", "medium", "severe", and "complete".

Note 1) With some aggregates and bitumens it has been found desirable to stir the mixture frequently during the early part of the cooling period to maintain a uniform film of the bituminous material on the aggregate particles.



The above procedure is applicable to mixtures made with dry aggregate and semi-solid asphalt. It must be modified when damp aggregates are be used or when the bituminous material consists of an emulsion or a cutback asphalt. In such instances, the moisture content of the aggregate and the temperatures of the bituminous material and aggregate should correspond with those which will prevail in actual construction. The prepared mixture should also be allowed to cure for various periods of time before it is subjected to the boiling test. Suggested curing periods for such mixtures are 3 hours, 1, 3 and 7 days.

